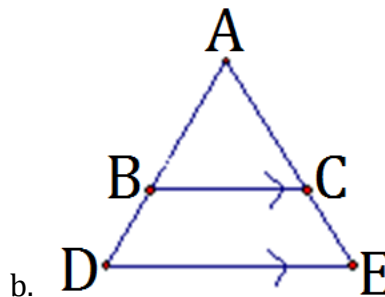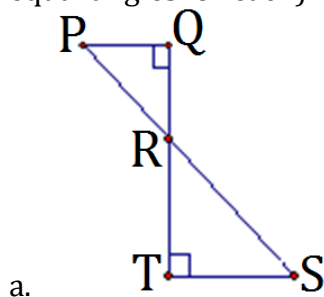Date: _____

Similar Triangles and Trigonometry Review

1. Indicate equal angles and corresponding sides in both diagrams. (3 side ratios and 3 equal angles for each)

   a.

   b.

2. The following are the side lengths in a right angled triangle. Calculate the missing side length to one decimal place.
   a. $a = 7$ $b = 6$ $c = ?$
   b. $a = ?$ $b = 14$ $c = 18$
   c. $a = \sqrt{27}$ $b = ?$ $c = 9$
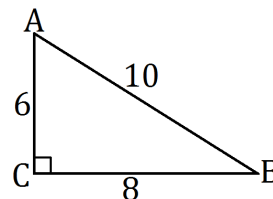
3. Evaluate the following. Keep two decimal places.
   a. $sin90°$ b. $cos50°$ c. $tan1.8°$

4. Solve for x. Keep two decimal places.
   a. $sinx = 0.936$ b. $cosx = 0.640$ c. $cosx = 0.55$
   d. $cos45° = \frac{x}{7}$ e. $tan73.1° = \frac{21}{x}$ f. $tan35° = \frac{2}{x}$

5. State the exact value (fractions) of the primary trig ratios in this triangle.
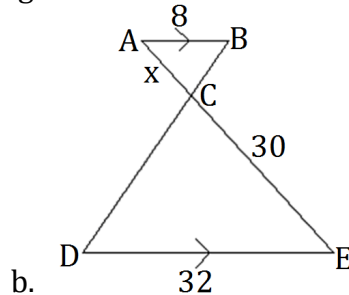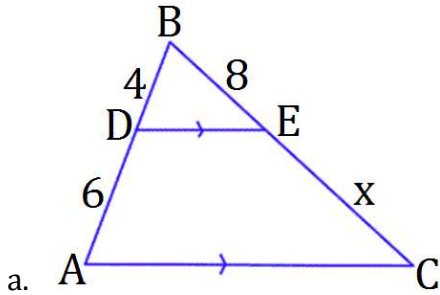   a. $sinB$
   b. $cosB$
   c. $tanA$

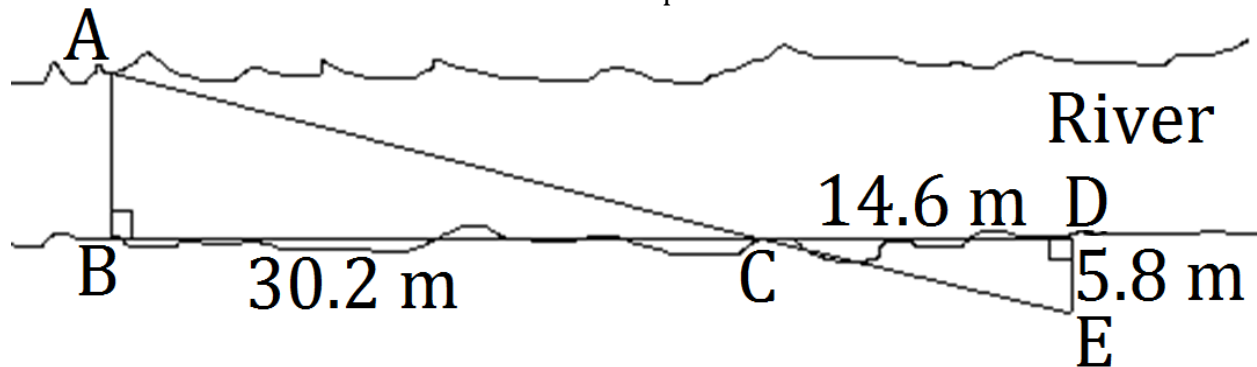6. Determine the value of x in the following triangles to 2 decimal places.

   a.

   b.
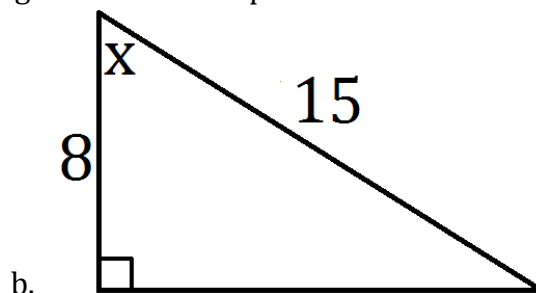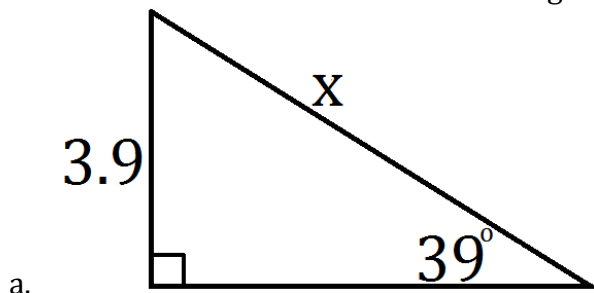
8. Calculate the value of x in the following diagrams.

a.

b.

9. Calculate the width of the river to 1 decimal place.

10. At 1:00 in the afternoon sunlight strikes a tree at an angle of depression of 30.0°. If the shadow cast by the tree is 10.2 m, what is the height of the tree? Round your answer to one decimal place.

11. An 8.0m ladder is leaning against a vertical wall. How far up the wall does the ladder reach and if the angle of elevation is 65°? Round your answer to two decimal places.